

KIPS MAIN CAMPUS 30-A Johar Town, Lahore Ph: 042-35179001-4, 0321-5179001	LAHORE CAMPUSES					OTHER CITIES							
	PIONEER	JOHAR TOWN	MATRIC	FAISAL TOWN	TOWNSHIP	KASUR	GUJRANWALA	GUJRAT	SIALKOT	FAISALABAD	SARGODHA	JHANG	
	IQBAL TOWN	NISHTER BLOCK	SODI WAL	GULSHAN RAVI	GULBERG	RAWALPINDI	ISLAMABAD	ABBOTTABAD	MIRPUR	PESHAWAR	OKARA		
	OUTFALL	RAVI ROAD	SHADMAN	MUGHALPURA	CHAUBURJI	SAHIWAL	BUREWALA	MULTAN	D.G KHAN	BAHAWALPUR	RY KHAN		

MCAT

FULL LENGTH PAPER-3

AS PER UHS PATTERN

Total MCQs: 220

Max. Marks: 1100

Time Allowed: 150 Minute

PHYSICS

- Q. 1 The dimensions for angular displacement is
- A) $[L^{-1}]$

B) $[T]$

C) $[L]$

D) Dimensionless
- Q. 2 Which of the following is not a S.I. base quantity
- A) Mass

B) Intensity of light

C) Velocity

D) Length
- Q. 3 Which of the following objects have every point on its surface equidistant from its centre of weight (centre of gravity):
- A) An egg

B) A cubic box

C) A table tennis ball

D) A triangle
- Q. 4 Which of the following statements is false
- A) The centre of gravity of a rectangular plate is at the point of intersection of its diagonals

B) The centre of gravity of a thin uniform rod is halfway along the rod

C) The centre of gravity of a square plate is at the point of its balance

D) The centre of gravity of a triangular plate is at one of its vertices
- Q. 5 Ideal fluid is
- A) Incompressible

B) Steady flow

C) Non – viscous

D) All of these
- Q. 6 A fluid entering a pipe from a point of larger cross section and exits from the point of the same pipe having smaller cross section. Its pressure energy at the exit would
- A) Decrease because of high velocity

B) Increase because of high velocity

C) Remains the same as inlet pressure

D) Increases because of low velocity
- Q. 7 What do you infer from the Bernoulli’s equation:
- A) This theorem is valid only for the turbulent flow of the fluid

B) Where the speed of the fluid is high, the pressure would be low

C) Where the speed is high, the pressure would be low

D) All of the above
- Q. 8 The value of absolute zero on Fahrenheit scale:
- A) 359.4°F

B) -459.4°F

C) 100°F

D) -259.4°F
- Q.1 1 Sv is equal to
- A) 0.01 rem

B) 100 rem

C) 1 rad

D) 0.01 Gy
- Q. 9 The normal temperature of a human body on centigrade scale is:
- A) 98.6°

B) 40°

C) 37°

D) 459.4°
- Q. 10 In S.H.M the K.E at the equilibrium position is:
- A) Zero as the acceleration is zero

B) Minimum as the instantaneous displacement is zero

C) Minimum as the instantaneous displacement is zero

D) Maximum as the velocity is maximum
- Q. 11 Maximum acceleration with zero velocity is possible only for:
- A) Non inertial frame of reference

B) Rotational motion

C) Simple harmonic motion

D) Random motion
- Q. 12 When a source is moving towards a stationary observer, the apparent change in frequency will be:
- A) Greater than the original frequency

B) Remains the same as that of original frequency

C) Smaller than the original frequency

D) None of the above

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Q. 13 A technique for detecting the pressure of objects under water by acoustical echo is called

- A) Doppler effect
- B) Sonar
- C) Radar
- D) Red shift

Q.2 Two unequal resistances are connected parallel across a battery. Which of the following statement is true?

- A) Same current will flow through both resistances.
- B) Current through smaller resistance is higher.
- C) Current through larger resistance is higher.
- D) Current can be higher in any resistance depending on emf of the cell.

Q. 14 If the waves interfere constructively, the amplitude of the resulting wave would be:

- A) Less than either of the individual wave
- B) Greater than either of the individual wave
- C) Equal to the shortest of the individual waves
- D) Equal to the greatest of the individual wave

Q. 15 Thin film of oil on water shows colour pattern when illuminated by white light due to

- A) Interference
- B) Dispersion
- C) Polarization
- D) Scattering

Q. 16 Monochromatic light means the light having:

- A) One colour
- B) Single frequency
- C) Single wavelength
- D) All of above

Q. 17 If two or more resistors are joined side by side, this combination is called:

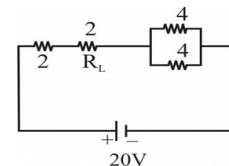
- A) Series combination of resistors
- B) Parallel combination of resistors
- C) Y delta combination of resistors
- D) None of the above

Q. 18 Which of the following quantities remain the same in/across the resistors connected in series Combination?

- A) Charge flow
- B) Current
- C) Both of the above
- D) Voltage

Q.3 What is voltage across R_L is the given circuit

- A) 3.6 V
- B) 6.3 V
- C) 12 V
- D) 10V



Q. 19 The strength of the magnetic field outside a solenoid is weak because:

- A) Lines of force are quite far from each other
- B) The lines of force are in the same direction and tend to cancel out the effect of each other
- C) The lines of force are opposite to each other and tend to cancel out the effect of each other
- D) Both a and c are correct

Q. 20 The direction of magnetic field as given by Fleming's rule for the solenoid is along:

- A) Normal to the solenoid
- B) The axis of the solenoid
- C) Can't be taken
- D) None of the above

Q. 21 The direction of magnetic field at a point on the magnetic lines of force can be taken along:

- A) Normal at that point
- B) Axis of the magnetic line of force at that point
- C) The tangent at that point
- D) Perpendicular to the axis of the solenoid

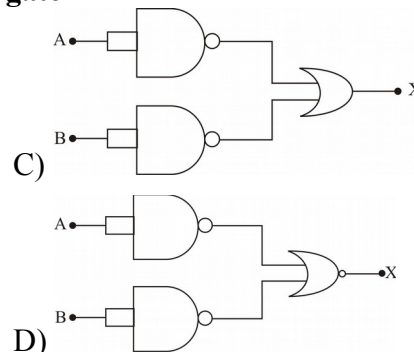
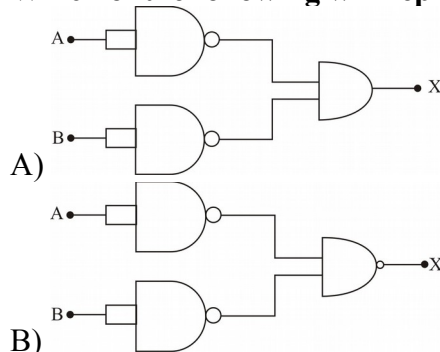
Q. 22 Shear stress addresses to the:

- A) Volume changes due to the applied stress
- B) Length changes due to the applied stress
- C) Shape changes due to the applied stress
- D) All of the above

Q. 23 The substances undergoing plastic deformation until they break are known as

- A) Brittle substances
- B) Ductile substances
- C) Elastic substances
- D) Plastic substances

Q.4 Which of the following will represent OR gate



Q. 24 Energy of the electromagnetic radiation is far more than 1.02 MeV. The dominant process will be

- A) Photoelectric effect
- B) Compton scattering
- C) Materialization of energy
- D) All are equally probable

Q. 25 The target in the X ray unit is given a:

- A) Zero potential
- B) High negative potential
- C) Low negative potential
- D) Positive potential

Q. 26 X rays are similar in nature to:

- A) Cathode rays
- B) Canal rays
- C) Gamma rays
- D) Beta rays

Q. 27 The velocity of X rays is equal to that of:

- A) Speed of sound
- B) Speed of electron
- C) Speed of α -particles
- D) Speed of light and γ -rays

Q. 28 X rays are affected by:

- A) Electric field only
- B) Magnetic field only
- C) Electric and magnetic field
- D) None of these

Q. 29 The penetrating power of X rays increases with:

- A) Decrease in velocity
- B) Increase in frequency
- C) Increase in velocity
- D) Decrease in their intensity

Q.5 Display in CRO would be stationary if input signal and saw tooth signal have same

- A) Time period
- B) Voltage
- C) Both "A" and "B"
- D) Amplitude

Q. 30 K_{α} characteristic X rays are produced due to the transition of electrons:

- A) From M to L shell
- B) From N to M shell
- C) From L to K shell
- D) From K to L shell

Q. 31 Name of the atom not used for tracer:

- A) Na-34
- B) I-131
- C) C-14
- D) C-12

Q.6 Which one is more energetic x-ray

- A) K_{α} x-ray
- B) K_{β} x-ray
- C) K_{γ} x-ray
- D) All kind of x-rays have same energy

Q. 32 The characteristic x-rays appear as discrete lines on a

- A) Discrete spectrum
- B) Continuous spectrum
- C) Band spectrum
- D) All of these

Q. 33 A detector which can count fast and operate at low voltages is

- A) G.M. counter
- B) Solid state detector
- C) Wilson could chamber
- D) Bubble chamber

Q. 34 Biological effect of radiation depends upon

- A) Ionization power of radiation
- B) Nature of part of body
- C) Both "A" and "B"
- D) Nature of material emitting the radiation

Q. 35 The unit of the rate of absorption of a radiation to have the same biological effects on different parts of the human body is called a:

- A) Roentgen
- B) Rem
- C) Rad
- D) Curie

Q.7 A method of recording and producing three dimensional image is named as

- A) Interference
- B) Diffraction
- C) Holography
- D) Topography

Q. 36 Pressure of a gas is:

- A) Proportional to the average translational K.E.
- B) Proportional to the absolute temperature
- C) Both of the above
- D) Proportional to the volume only

Q.8 In solid state detector ____ is used.

- A) Silicon
- B) Germanium
- C) Tin
- D) Both Si and Ge

CHEMISTRY

Q.9 The number of unpaired electrons in an atom with $Z=24$ at ground state will be

- A) 4
B) 5
C) 3
D) 6

Q.10 Given the data in the accompanying table for atom X

Ionization Energies	K.cal/ mole
1 st	258
2 nd	555
3 rd	1075
4 th	1480
5 th	9350

The most probable number of valence electrons for atom X is

- A) 5
B) 2
C) 4
D) 3

Q.11 The disadvantage of use of chlorinated water is

- A) Formation of NH_4Cl , NHCl_2 , NCl_3 which are eye irritants
B) Increased risk of bladder and rectal cancer by drinking water
C) Offensive odour and taste due to chlorinated phenols.
D) All of the above

Q.12 Which is the correct trend of oxidizing power in halogen on moving down the group

- A) $\text{F}_2 > \text{Cl}_2 > \text{Br}_2 > \text{I}_2$
B) $\text{Cl}_2 > \text{Br}_2 > \text{F}_2 > \text{I}_2$
C) $\text{F}_2 < \text{Br}_2 < \text{I}_2 < \text{Cl}_2$
D) $\text{F}_2 < \text{Cl}_2 < \text{Br}_2 < \text{I}_2$

Q.13 The coordination No. of Iron in $[\text{Fe}(\text{C}_2\text{O}_4)_3]$ is

- A) 2
B) 4
C) 6
D) 0

Q.14 Which one of the following characteristics of the transition metal is associated with their catalytic activity

- A) Variable oxidation states
B) Paramagnetic behavior
C) Colour of hydrated ions
D) High enthalpy of atomization

Q.15 Select amongst the followings which is not correct

- A) Nitrogen is poor conductor of heat and electricity
B) It only gives acidic oxides
C) Nitrogen has greatest tendency to attract electrons
D) The compounds are predominantly covalent

Q.16 Which of the following is the correct sequence of the steps for the manufacture of nitric acid by Birkland and Eyde's process

- A) Formation of nitric oxide \rightarrow Oxidation of nitric oxide to nitrous oxide \rightarrow Absorption of nitric oxide to water to give nitric acid \rightarrow Oxidation of nitrous acid to nitric acid
B) Formation of nitric oxide \rightarrow Oxidation of nitric oxide to nitrogen peroxide \rightarrow Absorption of nitric oxide to water to give nitric acid \rightarrow Oxidation of nitrous acid to nitric acid
C) Formation of nitric oxide \rightarrow Oxidation of nitric oxide to nitrogen dioxide \rightarrow Absorption of nitric oxide to water to give nitric acid \rightarrow Reduction of nitrous acid to nitric acid
D) None of these is correct

Q.17 In the conversion of nitrogen to ammonia using the Haber process, the main reason why the temperature is limited to about 450°C is because.

- A) At higher temperature catalyst breaks down
B) At higher temperature rate of reaction becomes slow
C) At higher temperature amount of ammonia decreases
D) A higher temperature would cost too much money to maintain

Q.18 Avogadro's number is the number of particles present in

- A) 1 dm^3 of molecule
B) Mass of one molecule
C) 1 g of molecule
D) 1g atom

Q.19 A balanced chemical equation always contains equal

- A) Volume of reactants and products
B) Number of atoms of reactants and products
C) Number of moles of reactants and products
D) Number of molecules of reactants and products

- Q.20** The process of evaporation of a liquid in nature is accompanied by
 A) Increase in enthalpy
 B) Decrease in free energy
 C) Increase in entropy
 D) All of these
- Q.21** At the same temperature and pressure helium is more ideal than hydrogen due to
 A) Greater molar mass
 B) Greater molecular size
 C) Lesser molar mass
 D) Lesser molecular size
- Q.22** The correct electronic configuration of Cr (Z = 24) is
 A) [Ne] 4s¹3d⁵
 B) [Ar] 4s¹3d⁵
 C) [Ne] 4s²3d⁴
 D) [Ar] 4s²3d⁴
- Q.23** The particle with highest e/m ratio
 A) Electron
 B) Proton
 C) Neutron
 D) Meson
- Q.24** The minimum angle between bond pair –bond pair is shown by
 A) SnCl₂
 B) NF₃
 C) SO₃
 D) H₂O
- Q.25** In which of the following central atom can not form co-ordinate covalent bond
 A) BF₃
 B) NH₃
 C) NH₄⁺
 D) H₂O
- Q.26** Which one of the following equations correctly defines the enthalpy changes of formation of carbon monoxide
 A) C(s) + 1/2O₂(g) → CO(g)
 B) C(g) + 1/2O₂(g) → CO(g)
 C) C(s) + O(g) → CO(g)
 D) C(g) + CO₂(g) → 2CO(g)
- Q.27** Which of the following is not applicable to thermochemical process
 A) It represents chemical change
 B) It represents heat change
 C) Spontaneity of reaction
 D) It represents the physical states of reactants and products
- Q.28** Which one of the following statement is incorrect
 A) A solution freezes at a lower temperature than the pure solvent.
 B) A solution boils at a higher temperature than the pure solvent.
 C) 0.1m NaCl solution and 0.1m sugar solution have the same boiling point
 D) Osmosis cannot take place without a semi-permeable membrane.
- Q.29** The molarity of a solution prepared by adding 7.1 g of Na₂SO₄ (formula weight 142 amu) to enough water to make 100 ml volume is
 A) 2.0M
 B) 0.5M
 C) 1.0M
 D) 0.05M
- Q.30** Which one among the following is the strongest reducing agent
 $\text{Fe}^{2+} + 2\text{e}^- \rightarrow \text{Fe}(-0.44 \text{ V})$
 $\text{Ni}^{2+} + 2\text{e}^- \rightarrow \text{Ni}(-0.25 \text{ V})$
 $\text{Sn}^{2+} + 2\text{e}^- \rightarrow \text{Sn}(-0.14 \text{ V})$
 $\text{Fe}^{3+} + \text{e}^- \rightarrow \text{Fe}^{2+}(-0.77 \text{ V})$
 A) Fe³⁺
 B) Ni
 C) Fe²⁺
 D) Sn
- Q.31** Which of the following statements about the reaction given below are correct
 $\text{IO}_3^-(\text{aq}) + 2\text{I}^-(\text{aq}) + 6\text{H}^+(\text{aq}) \rightarrow 3\text{ICl}_2^-(\text{aq}) + 3\text{H}_2\text{O}(\text{l})$
 A) The oxidation number of iodine in the iodate ion, IO₃⁻ (aq), changes from +5 to +1
 B) The oxidation number of iodine in the iodide ion I⁻, changes from -1 to +2.
 C) The oxidation number of chlorine in the iodide ion I⁻, changes from -1 to -2
 D) Iodate ions are oxidized
- Q.32** Acidic buffer can be prepared by mixing
 A) Weak acid and weak base
 B) Weak acid and strong base
 C) Strong acid and strong base
 D) Strong base and strong acid
- Q.33** Very small value of K_c for a reaction at equilibrium indicates
 A) Very small amount of reactants
 B) Very small amount of products
 C) The rate of backward reaction is greater than that of the forward one
 D) The rate of forward reaction is greater than that of the backward one

- Q.34** Which of the following statements best describes how a catalyst works
- A catalyst changes the potential energies of the reactants and products
 - A catalyst decreases the temperature of the reaction which leads to a faster rate
 - A catalyst lowers the activation energy barrier for the reaction by providing a different reaction mechanism
 - A catalyst raises the activation energy for the reaction which produces a faster rate
- Q.35** The rate constant of a first order reaction is 3×10^{-6} per second. If the initial concentration is 0.10 M, the initial rate of reaction is
- $3 \times 10^{-5} \text{ Ms}^{-1}$
 - $3 \times 10^{-8} \text{ Ms}^{-1}$
 - $3 \times 10^{-6} \text{ Ms}^{-1}$
 - $3 \times 10^{-7} \text{ Ms}^{-1}$
- Q.36** Coal contain sulphur
- 1-3%
 - 2-5%
 - 1-9%
 - 3-8%
- Q.37** The IUPAC name of the following compound is
- 2, 4, 5-triheptene
 - Hepta-1, 3, 5-triene
 - 2, 4, 6- triheptene
 - 2, 4, 6- heptatfiene
- Q.38** Propylacetate and valeric acid are which type of isomers
- Tautomers
 - Functional
 - Position
 - Metamers
- Q.39** The product formed by acid catalysed hydration of 2-phenyl propene is
- 3-phenyl-2-propanol
 - 2-phenyl-2-propanol
 - 1-phenyl-1-propanol
 - 1-phenyl-1-propanol
- Q.40** Markownikoff's rule is best applicable to the reaction between
- $\text{C}_3\text{H}_6 + \text{Br}_2$
 - $\text{C}_2\text{H}_4 + \text{HCl}$
 - $\text{C}_3\text{H}_8 + \text{Br}_2$
 - $\text{C}_3\text{H}_6 + \text{HBr}$
- Q.41** A compound X ($\text{C}_4\text{H}_9\text{Br}$) undergoes the following reactions
- $$\text{C}_4\text{H}_9\text{Br} \xrightarrow{\text{NaOH(aq)/heat}} \text{C}_4\text{H}_{10}\text{O} \xrightarrow{\text{Cr}_2\text{O}_7^{2-}, \text{H}^+(\text{aq})/\text{heat}} \text{C}_4\text{H}_8\text{O}$$
- What is X
- 1-Bromobutane
 - 2-Bromobutane
 - 1-bromo-2-methylpropane
 - 2-Bromo-2-Methylpropane
- Q.42** Elimination from 2-bromobutane results in
- Equimolar mixture of 1 and 2-butene
 - Predominantly 2-butene
 - Predominantly 1-butene
 - 2-butyne
- Q.43** The compound 'leaf alcohol' is partly responsible for the smell of new-mown grass
- $$\text{CH}_3\text{CH}_2\text{CH}=\text{CHCH}_2\text{CH}_2\text{OH}$$
- leaf alcohol
- Which two compounds will be formed when 'leaf alcohol' is oxidized using hot, concentrated manganate(VII) ions?
- $\text{CH}_3\text{CO}_2\text{H}$ and $\text{HOCH}_2\text{CH}_2\text{CH}_2\text{CO}_2\text{H}$
 - $\text{CH}_3\text{CO}_2\text{H}$ and $\text{HO}_2\text{CCH}_2\text{CH}_2\text{CO}_2\text{H}$
 - $\text{CH}_3\text{CH}_2\text{CO}_2\text{H}$ and $\text{HO}_2\text{CCH}_2\text{CO}_2\text{H}$
 - $\text{CH}_3\text{CH}_2\text{CO}_2\text{H}$ and $\text{HOCH}_2\text{CH}_2\text{CO}_2\text{H}$
- Q.44** Consider the following statements about fermentation process. Which of them is not incorrect
- CO_2 is produced in all fermentation reactions
 - It is an endothermic process
 - Occurs at extremely low temperature
- I only
 - I and III
 - I and II
 - II and III
- Q.45** Rectified spirit has percentage of alcohol.
- 12 %
 - 24%
 - 95%
 - 100%
- Q.46** Dehydration of methyl alcohol with concentrated sulphuric acid gives
- CH_3CHO
 - C_2H_4
 - HCHO
 - None of these

- Q.47** Aldehyde and ketone give which of the following mechanism of reaction
 A) Electrophilic addition reaction
 B) Nucleophilic addition reaction
 C) Elimination reaction
 D) Electrophilic substitution reaction
- Q.48** Ketones are less reactive than aldehydes due to
 A) Stearic hindrance
 B) Inductive effect of alkyl group
 C) Both "A" and "B"
 D) Neither "A" nor "B"
- Q.49** Addition of CN^- to a carbonyl group will be most favoured by
 A) HCHO
 B) CH_3CHO
 C) $\text{CH}_3 - \text{COCH}_3$
 D) $\text{CH}_3 - \text{CO} - \text{CH}_2\text{CH}_3$
- Q.50** $\text{C}_6\text{H}_5\text{COCl}$ is named as
 A) Benzyl chloride
 B) Benzoyl chloride
 C) Benzyl dichloride
 D) Benzaldehyde
- Q.51** Ethanol can be converted in ethanoic acid by
 A) Hydrogenation
 B) Hydration
 C) Oxidation
 D) Fermentation
- Q.52** Which is not base catalyzed reaction of carbonyl compound like aldehyde
 A) Addition of NaHSO_3
 B) Addition with HCN
 C) Haloform reaction
 D) Polymerization
- Q.53** Which of the following amino acids can form hydrogen bonds with their side (R) groups
 A) Asparagine
 B) Glutamine
 C) Aspartic acid
 D) All of these
- Q.54** Which of the following is an essential amino acid
 A) Tryptophan
 B) Lysine
 C) Methionine
 D) All of these
- Q.55** Serine and threonine are polar amino acids due to
 A) Reactive hydroxyl group in the side chain
 B) Reactive alcoholic group in the side chain
 C) Reactive keto group in the side chain
 D) Reactive aldehyde group in the side chain
- Q.56** Which of the following amino acids has the highest nitrogen content per mole
 A) Arginine
 B) Glutamine
 C) Asparagine
 D) Alanine
- Q.57** Condensation reactions form covalent bonds between the one of amino acid and the of a second amino acid during protein synthesis
 A) R group; R group
 B) Amino group carboxyl group
 C) Amino group; R group
 D) Carboxyl group R group
- Q.58** Which of the following is not a neutral amino acid
 A) Valine
 B) Histidine
 C) Proline
 D) Alanine
- Q.59** Nylon threads are made of
 A) Polyester polymer
 B) Polyvinyl polymer
 C) Polyamide polymer
 D) Polyethylene polymer
- Q.60** Which of the following is not an example of addition polymer
 A) Polystyrene
 B) PVC
 C) Nylon
 D) Propylene
- Q.61** The conversion of maltose to glucose is possible by the enzyme
 A) Zymase
 B) Maltase
 C) Lactase
 D) Diastase
- Q.62** Cellulose is a polymer of
 A) Glucose
 B) Ribose
 C) Fructose
 D) Sucrose
- Q.63** Iodine test is shown by
 A) Starch
 B) Polypeptides
 C) Glycogen
 D) Glucose
- Q.64** Nylon – 66 is a polyamide of
 A) Vinylchloride and formaldehyde
 B) Adipic acid and hexamethylene diamine
 C) Adipic acid and methyl amine
 D) Formaldehyde and melamine

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- Q.65** Which one of the following is an invaluable source of energy but does not cause pollution
 A) Fossil fuels
 B) Sun
 C) Nuclear energy
 D) Petroleum
- Q.66** During the disinfection by Chlorine, if water contains NH_3 then possible side effects are
 A) Chlorinated phenol
 B) Chloroform
 C) Chloramines
 D) H_2S

ENGLISH

Directions: Choose the right option to complete the following sentences.

- Q.67** All the _____ and ceremony of the royal marriage was telecast on tv.
 A) Festival
 B) Pomp
 C) Happiness
 D) Romp
- Q.68** A glue produced by bees to _____ their hives appears to contain antibiotic substances.
 A) Build
 B) Decorate
 C) Collect
 D) Structure
- Q.69** Shaken by two decades of virtual anarchy, the majority of people was ready to buy _____ at any price.
 A) Order
 B) Hope
 C) Liberty
 D) Emancipation
- Q.70** Many myths and legends, however _____, often possess a grain of truth.
 A) Delightful
 B) Accurate
 C) Unbelievable
 D) Eternal

SPOT THE ERROR

In the first type of sentences, some segments of each sentence are underlined. Your task is to identify that underlined segment of the sentence, which contains the mistake that needs to be corrected.

- Q.71** It should also help you to understand how can you make better use of the scientific method in your every day living.
 A) B) C) D)
- Q.72** We wish today was sunny so that we could spend the day in the country communing with nature.
 A) B) C) D)
- Q.73** My brother doesn't care how much does the car cost because he is going to buy it anyway.
 A) B) C) D)
- Q.74** Stevens was very delighted to see that he was declared more popular than any talk show host in the USA.
 A) B) C) D)
- Q.75** Wax tablets were wooden planks covering in a thick enough coating of wax to record the impressions of a stylus.
 A) B) C) D)
- Q.76** If England had not imposed a tax on tea two hundred and twenty years ago, will the United States have remained part of the British Commonwealth?
 A) B) C) D)

Directions:

In each question in the following, four alternative sentences are given. Choose the **CORRECT** one and fill the circle corresponding to that letter in the answer sheet.

- Q.77** A) Christopher could not tackle the drink until he had not boiled it.
 B) Until he had boiled It, Christopher could not tackle the drink.
 C) Christopher could not tackle the drink until he had boiled it.
 D) Christopher could not tackle the drink till he had not boil it.

PIONEER	JOHAR TOWN	MATRIC	FAISAL TOWN	TOWNSHIP
IQBAL TOWN	NISHTER BLOCK	SODIWAL	GULSHAN RAVI	GULBERG
OUTFALL	RAVI ROAD	SHADMAN	MUGHALPURA	CHAUBURJI

KASUR	GUJRANWALA	GUJRAT	SIALKOT	FAISALABAD	SARGODHA	JHANG
RAWALPINDI	ISLAMABAD	ABBOTTABAD	MIRPUR	PESHAWAR	OKARA	
SAHIWAL	BUREWALA	MULTAN	D.G KHAN	BAHAWALPUR	R.Y KHAN	

- Q.78** A) The parent who I have offended often come around after a term of years and tell me that his son was right.
B) The parent who I have offended often comes around after a term of years and tells me that his son was right.
C) The parents whom I have offended often comes around after a term of years and tells that his son was right.
D) The parent whom I have offended often comes around after a term of years and tells me that his son was right.
- Q.79** A) Adam begins each day with warm-up exercises, a long run and taking a hot shower.
B) Adam begin each day with warm-up exercises a long run and taking a hot shower.
C) Adam begins each day with warm-up exercises, long run and to take a hot shower.
D) Adam begins each day with warm-up exercises, a long run and a hot shower.
- Q.80** A) Last year, Matt earned twice as much as his brother, who has a better position.
B) Last year, Matt earn twice more than his brother, who has a better position.
C) Last year, Matt earned twice as many as his brother, who has a better position.
D) Last year, Matt earned twice as more as his brother, which has a better position.
- Q.81** A) Most members of the trade union rejected the mayor's demand that they return to work.
B) Most members of the trade union rejected the mayor's demand that the members return to work.
C) Most members of the trade union rejected the mayor's demand for them to return to work.
D) Most members of the trade union rejected the mayor's demand that they would return to work.
- Q.82** A) Mr.Bittering had raised the mirror to his face.
B) Mr.Bittering rose the mirror to his face.
C) Mr.Bittering raised the mirror to his face.
D) Mr.Bittering had risen the mirror at his face.
- Q.83** A) When Friday rolls around, do you go to the mall, head for a bar, or are you going to work?
B) When Friday rolls around, do you go to the mall, head for a bar, or go to work?
C) When Friday rolls around, do you go to the mall, heading for a bar, or are you going to work?
D) When Friday rolls around, are you going to the mall, head for a bar, or are you going to work?
- Q.84** A) A thousand million litres of water are delivered to the district daily.
B) Thousand million litres of water are delivered to the district daily.
C) A thousand million litres of water is delivered to the district daily.
D) A thousand million litre of water are delivered to the district daily.
- Q.85** A) The space program has been battered in bureaucratic wrangling.
B) The space program has been battered into bureaucratic wrangling.
C) The space program has been battered by bureaucratic wrangling.
D) The space program has been battered to bureaucratic wrangling.
- Q.86** A) Then he sat down in corner and remained quite.
B) Then he sat down in corner and remained quite.
C) Then he sat down in corner and remain quiet.
D) Then he sat down in corner and remained quiet.

Directions:

In each of the following question, four alternative meanings of a word are given. You have to select the nearest correct meaning of the given word and fill the appropriate Bubble / Circle on the MCQ Response Form.

Q.87 DEMURE

- A) Retiring B) Contradict C) Allure D) Murmuring

Q.88 DISDAIN

- A) Condescension B) Mundane C) Adore D) Decorum

- Q.89

DERACINATE

A) Inculcate

B) Incarnate

C) Pull up

D) Send for
- Q.90

DISSONANCE

A) Assonance

B) Elegance

C) Diffidence

D) Conflict
- Q.91

DOWNY

A) Brownie

B) Velvety

C) Frowzy

D) Jagged
- Q.92

EMULATE

A) Humiliate

B) Impersonate

C) Generate

D) Dissipate
- Q.93

DULCET

A) Assonant

B) Scathing

C) Strident

D) Deficit
- Q.94

ENNUI

A) Languor

B) Vivacity

C) Nimbleness

D) Satisfaction
- Q.95

EXONERATE

A) Validate

B) Indict

C) Vindicate

D) Hibernate
- Q.96

DISCOMBOBULATE

A) Exonerate

B) Decelerate

C) Disconcert

D) Ameliorate

BIOLOGY

- Q.97

Study of environmental relations is called:

A) Physiology

B) Paleontology

C) Morphology

D) Ecology
- Q.98

Synecology is study of _____ in relation with environment:

A) Community

B) Population

C) Ecosystem

D) Biosphere
- Q.99

Any plant containing foreign gene:

A) Clone

B) Transgenic plant

C) Recombinant plant

D) Eugenic plant
- Q.100

Killing of aphid by use of wasp is an example of:

A) Bioremediation

B) Bioabsorption

C) Biological control

D) Chemical control
- Q.101

Endocytosis which involves ingestion of solid material is called:

A) Pinocytosis

B) Solidocytosis

C) Phagocytosis

D) Exocytosis
- Q.102

Ribosomes are composed of almost an equal amount of:

A) Protein & lipid

B) Protein & RNA

C) RNA & Lipid

D) RNA & Carbohydrate
- Q.103

Process that is absent in plant cell:

A) Cytokinesis

B) Osmosis

C) Karyokinesis

D) Phagocytosis
- Q.104

Outermost boundary in plant cell is:

A) Cell wall

B) Capsule

C) Cell membrane

D) Slime
- Q.105

DNA is not enclosed in nucleus of:

A) Fungi

B) Animals

C) Plants

D) Cyanobacteria
- Q.106

Golgi apparatus in plants can also be called as:

A) Lysosome

B) Peroxisome

C) Dictyosome

D) Glyoxisome
- Q.107

Mitosis without cytokinesis results in a:

A) Monokaryotic cell

B) Uninucleated cell

C) Multinucleated cell

D) Anucleated cell
- Q.108

Which structure of plant cell does not permit cytokinesis by furrowing?

A) Cell membrane

B) Centriole

C) Cell wall

D) Phragmoplast

- Q.109** Which phases of mitosis are opposite to each other?
 A) Prophase & metaphase
 B) Prophase & telophase
 C) Metaphase & telophase
 D) Prophase & Anaphase
- Q.110** All of the following are related with mitosis except:
 A) Cloning
 B) Healing
 C) Tissue culture
 D) Conjugation
- Q.111** Which cell can undergo meiosis?
 A) Haploid
 B) Diploid
 C) Polyploid
 D) Monoploid
- Q.112** Pairing and tetrad formation is characteristics of:
 A) Leptotene
 B) Pachytene
 C) Zygotene
 D) Diplotene
- Q.113** In a a cell dividing through meiosis, number of chiasmata at end of diakinesis is:
 A) 0
 B) 2
 C) 1
 D) Many
- Q.114** Lowest number of chromosome in eukaryotic cell is 1 pair which is present in:
 A) Bacteria
 B) Virus
 C) Cyanobacteria
 D) Penecillium
- Q.115** It is least soluble in water is:
 A) Glucose
 B) Lactose
 C) Cellulose
 D) Sucrose
- Q.116** Dihydroxyacetone is a:
 A) Hexose
 B) Tetrose
 C) Pentose
 D) Triose
- Q.117** One which contains carbon to carbon double bond:
 A) Oleic acid
 B) Palmitic acid
 C) Butyric acid
 D) Acetic acid
- Q.118** Glycylalanine is a:
 A) Dipeptide
 B) Amino acid
 C) Tripeptide
 D) Polypeptide
- Q.119** Adenine and guanine are:
 A) Main nitrogenous bases of nucleic acids
 B) Main nitrogenous bases of phospholipids
 C) Main nitrogenous wastes of humans
 D) Main types of amino acids in proteins
- Q.120** Optimum temperature for enzymes of human body is:
 A) 90 °F
 B) 95 °F
 C) 98 °F
 D) 100 °F
- Q.121** The cofactor usually acts as " bridge" between:
 A) Enzyme & substrate
 B) Enzyme & product
 C) Coenzyme & substrate
 D) Activator & substrate
- Q.122** It is not true about induce fit model:
 A) Explains mechanism of enzyme action
 B) Enzyme is specific in nature
 C) Enzyme is a flexible structure
 D) Enzyme doesn't show change during reaction
- Q.123** The optimum pH of catalase is:
 A) Slightly alkaline
 B) Highly acidic
 C) Highly alkaline
 D) Slightly acidic
- Q.124** Cyanide for enzymes act as:
 A) Substrate
 B) Prosthetic group
 C) Cofactor
 D) Inhibitor
- Q.125** HIV is a:
 A) Virion
 B) Prion
 C) Viroid
 D) Venome
- Q.126** Example of rod shape bacteria are:
 A) Spirochete
 C) Rhizopus
 C) Diplococcus
 D) E. coli
- Q.127** Tetracycline and penicillin are
 A) Disinfectants
 B) Antibiotics
 C) Antiseptics
 D) Antigens
- Q.128** It is a drug that is obtained from fungi and also used against fungi:

- A) Penicillin

B) Griseofulvin
- Q.129 Genus name of pepper is:

A) *Capsicum*

B) *Cestrum*
- Q.130 Following alkaloid is obtained from *Atropa balladona*:

A) Atropine

B) Senna

C) Streptomycin

D) Daturine
- Q.131 It is used to make alcohol from molasses after getting table sugar:

A) Barley

B) Potato

C) Sugar cane

D) Lemon grass
- Q.132 In sponges, water enters through:

A) Ostia

B) Siphon

C) Osculum

D) Pore
- Q.133 Endoparasite that inhabits blood of host:

A) *Fasciola*

B) *Schistosoma*

C) *Ancylostoma*

D) *Taenia*
- Q.134 Number of main digestion sites in human digestive system are:

A) 2

B) 4

C) 3

D) 1
- Q.135 Mastication is the main function of:

A) Lips

B) Tongue

C) Teeth

D) Cheeks
- Q.136 Muscular tube that passes through pharynx and joins stomach is:

A) Trachea

B) NG tube

C) Nerve canal

D) Esophagus
- Q.137 These are finger like projections that increase surface area of ileum:

A) Villi

B) Microvilli

C) Folds

D) Crypts
- Q.138 Lungs are separated from abdominal cavity by a muscular sheath called:

A) Pleura

B) Rib cage

C) Pericardium

D) Diaphragm
- Q.139 Most of the oxygen in our body is transported through:

A) Water

B) Blood

C) Plasma

D) Lymph
- Q.140 In adults, RBCs are formed in:

A) Liver

B) Spleen

C) Bone marrow

D) Thymus
- Q.141 Substance formed by basophils:

A) Heparin

B) Histones

C) Antibody

D) Tubulin
- Q.142 Which one is not a nitrogen waste?

A) Hypoxanthine

B) Xanthophyll

C) Xanthine

D) Allantoin
- Q.143 Right kidney is slightly lower than left kidney due to:

A) Heart

B) Liver

C) Pancreas

D) Lungs
- Q.144 Capillaries present around the loop of Henele:

A) Vasa recta

B) Peritubular

C) Lacteals

D) Glomerulus
- Q.145 The only possible treatment in end stage renal failure is:

A) Hemodialysis

B) Peritoneal dialysis

C) Lithotripsy

D) Kidney transplantation
- Q.146 Ureters open into the urinary bladder through:

A) Pelvis

B) Hilus

C) Ureteral orifices

D) Urethral orifices
- Q.147 It is involved in screening of sensory information coming from eyes and ears:

A) Forebrain

C) Hindbrain

- B) Midbrain
D) Spinal cord
- Q.148 Major coordinating centre of human body is:**
A) Thalamus
B) Cerebrum
C) Hypothalamus
D) Cerebellum
- Q.149 Glands and muscles are activated by:**
A) Sensory neurons
B) Associative neuron
C) Relay neurons
D) Motor neurons
- Q.150 The system involved in preparing our body in condition of stress and emergency:**
A) Nervous system only
B) Endocrine system only
C) Both nervous & endocrine system
D) Both endocrine & exocrine system
- Q.151 Testes consist of complex duct system called as;**
A) Vas deferens
B) Malpighian tubules
C) Seminiferous tubules
D) Ejaculatory duct
- Q.152 In humans, ovaries after birth contain:**
A) Oogonia
B) Primary oocyte
C) Secondary oocyte
D) Ova
- Q.153 Fallopian tube in humans is important for:**
A) Ovulation
B) Fertilization
C) Conception
D) Development
- Q.154 Colour of corpus leuteum is:**
A) Red
B) Yellow
C) Grey
D) Black
- Q.155 Syphilis is caused by:**
A) Coccus
B) Bacillus
C) Spirillum
D) Spirochete
- Q.156 Skeleton of arms and legs is:**
A) Exoskeleton
B) Endoskeleton
C) Axial skeleton
D) Appendicular skeleton
- Q.157 Unpaired facial bones are:**
A) Maxilla, Zygomatic
B) Palatine, Inferior concha
C) Nasal, Lacrimal
D) Mandible, Vomer
- Q.158 These are the vertebrae of abdominal region:**
A) Cervical
B) Lumbar
C) Thoracic
D) Pelvis
- Q.159 Pelvic girdle connects hind limb with:**
A) Scapula
B) Hip bone
C) Sacrum
D) Coccyx
- Q.160 All of the following are true about skeletal muscles except:**
A) Striated
B) Uninucleate
C) Voluntary
D) Movement
- Q.161 A hormone actually controls a process by acting on:**
A) Substrate
B) Enzyme
C) Receptor
D) Product
- Q.162 Hormone produced by hypothalamus:**
A) Progesterone
B) Thyroxin
C) Insulin
D) Oxytocin
- Q.163 Somatotrophic releasing factor is secreted:**
A) In child hood
B) In old age
C) At puberty
D) Throughout life
- Q.164 It is a hormone that regulates our diurnal rhythms:**
A) Melatonin
B) MSH
C) Melanotonin
D) Prolactin
- Q.165 Which are components of immune system?**
A) T lymphocytes
B) Antibodies
C) B lymphocytes
D) All "A" "B" "C"
- Q.166 Chemical nature of an antibody is:**
A) Protein
B) Carbohydrates
C) Mostly protein
D) Lipid
- Q.167 Polypeptide chains in an antibody are held together through:**
A) Peptide bond
B) Hydrogen bond
C) Disulphide linkage
D) Glycosidic linkage

- Q.168** Cell mediated immune response is developed by:
- A) Neutrophils
B) Monocytes
C) B lymphocytes
D) T lymphocytes
- Q.169** In snake bite, passive immunity is produced by:
- A) Antigen
B) Antivenom
C) Antiseptic
D) Antibiotic
- Q.170** Photosynthetic pigments are organized into clusters called:
- A) Cytochromes
B) Phytochromes
C) Photosystems
D) Chromatophores
- Q.171** The carotenes are red to _____ pigments:
- A) Blue
B) Orange
C) Yellow
D) Green
- Q.172** The membranes found in stroma of chloroplast form an elaborate interconnected set of flat, disc like sacs called:
- A) Cristae
B) Cisternae
C) Thylakoids
D) Tonoplast
- Q.173** Pyruvic acid (pyruvate) is the end product of:
- A) Krebs cycle
B) Urea cycle
C) Calvin cycle
D) Glycolysis
- Q.174** Which is an iron containing compound involved in light dependent phase of photosynthesis?
- A) Ferridoxin
B) Plastocynin
C) NADP
D) Chlorophyll
- Q.175** A probe is a single stranded nucleotide sequence that will hybridize during gene sequencing into certain:
- A) DNA
B) Amino acid
C) RNA
D) Fatty acid
- Q.176** In patients with cystic fibrosis, there is formation of:
- A) Blood clot
B) Mucus plug
C) Hematoma
D) Atheroma
- Q.177** Flanking site is important for:
- A) Reverse transcriptase
B) Taq polymerase
C) Restriction endonuclease
D) DNA ligase
- Q.178** Gene therapy involves:
- A) Analysis of DNA
B) Cloning of DNA
C) Treatment by gene
D) Inheritance of gene
- Q.179** PCR taken its name from:
- A) RNA polymerase
B) DNA ligase
C) DNA polymerase
D) Endonuclease
- Q.180** An important turning point for evolutionary theory was the birth of:
- A) Population ecology
B) Demography
C) Population genetics
D) Biometry
- Q.181** Prokaryotes are the ancestors of all life as evident from:
- A) Biochemistry
B) Cell biology
C) Molecular biology
D) All "A" "B" "C"
- Q.182** 3rd trophic level in a food chain is:
- A) Producer
B) Carnivores
C) Herbivores
D) Decomposers
- Q.183** Main source of energy in an ecosystem is:
- A) Wind
B) Humus
C) Detritus
D) Sun
- Q.184** Regions suitable for forest growth:
- A) Desert
B) Grasslands
C) High rain fall regions
D) Tundra